

“A question that often arises is whether we are today in the midst of a qualitative or merely a quantitative change. I would like to suggest that with the release of the energy of the atom, growth of electronics and man's ability to operate in outer space, 'the world' has been created. This demands a change of our values. And there is no hope for those who wish to advance step by step, following outmoded methods.”

A scientist, administrator and a warm human being, Dr Vikram Sarabhai's perception of change is impregnated with the application of science and technology.

Dr Sarabhai always remained the socially committed scientist, deeply concerned with improving the quality of life of the masses with the aid of science and technology. Despite the stupendous workload and responsibilities attendant with this mission, he remained an equally sensitive man, responsive to the beauty of life and the environment around him. "In creative work, one should be able to see squirrels and birds," he had said while delivering the keynote address at the silver jubilee celebrations of the Tata Institute of Fundamental Research, in April 1971.

This issue of Countdown is dedicated to the fond memory of Dr Vikram Sarabhai on the occasion of his 86th birth anniversary.



**A VISIONARY WHO COULD SEE
SQUIRRELS AND BIRDS**

Dr Vikram Sarabhai Memorial Lecture

Dr Vikram Sarabhai Memorial Lecture is being organized at VSSC on August 12 every year, commemorating the birth anniversary of Dr Vikram A Sarabhai, the visionary scientist. Dr APJ Abdul Kalam, Dr RA Mashelkar, Dr S Ramaseshan, Dr PK Iyengar, Dr Raja Ramanna, Dr Kota Harinarayana, Prof SK Joshi and others were some of the luminaries who have delivered the Lecture in yester years.

Prof VS Ramamurthy, Secretary, Dept of Science and Technology, Government of India delivered the Memorial Lecture to commemorate the 86th birth anniversary of Dr Sarabhai on August 12, 2005. The Memorial Lecture was delivered before a packed auditorium. Shri VP Bahugangadharan introduced the distinguished speaker to the audience. Dr BN Suresh, Director, VSSC, in his introductory remarks, gave a recap of what Dr Sarabhai is to the Indian Space Programme and the genesis of the Lecture.

Prof Ramamurthy spoke on a novel area, 'Entrepreneurship Development in Science and technology'. Entrepreneurship has a great potential in the advancement of science and technology. When Science and Technology becomes application oriented and percolates down to the grass root level, it gives rise to a number of innovations. Those who cash in the innovative ideas, become an entrepreneur. Ideas can strike at any time, in any one. What is important is that the new ideas should be registered at once, before getting lost due to oblivion. In countries like Japan, Idea Banks exist especially in universities, where professors and research scholars can lodge their ideas for further refining. It is the simple method of tapping ideas.

In India also several schemes are in vogue to pool nascent ideas. The National Science and Technology Entrepreneurship Development Board, which functions under the Department of Science and Technology is one such venture. A lot more has to be done in India. The leaps and bounds with which the People's Republic of China has made a breakthrough in global market should be an eye opener for India. Indian markets, for that matter any market in the world including the United States, are flooded with Chinese goods even Ganesh idols with 'Made in China' tags. These are the direct offshoots of a successful entrepreneurship practiced by China. India should not lose time to cash in at the earliest opportunity.

The Lecture was followed by a question-answer session. As a token of affection and goodwill, Dr BN Suresh presented a memento to Prof Ramamurthy. Later, Prof Ramamurthy visited the Space Museum also.



Dr BN Suresh, Director delivering the introductory remarks

Prof VS Ramamurthy, Secretary, Dept of Science and Technology

Prof Ramamurthy, who joined the Training School of the then Atomic Energy Establishment, Trombay has since engaged in full time research in Nuclear Physics. Part of his work on Fission Theory earned him the Ph D degree from the University of Bombay in 1971. In 1989, Ramamurthy moved to Institute of Physics, Bhubaneswar as Director. He was instrumental for the installation and commissioning of a 3 MV Pelletron Accelerator in the Institute. Prof Ramamurthy has assumed charge as Secretary to Government of India, Department of Science and Technology, New Delhi in July 1995.

Prof Ramamurthy is a Fellow and Honorary Member of many prestigious academia and associations. He is a distinguished Professor at Engineering Staff College Of India, Hyderabad. He is recipient of many awards including FIE Foundation Award, 1995 and has co-authored a monograph on Nuclear Radiation Detectors.



Students at the Dr Sarabhai Memorial Lecture

Nature decks up in her finery in the month of August. So is the Vikram Sarabhai Space Centre. The Familiarisation Programme, organized annually to coincide with his birth anniversary in August, is intended for the wards of the employees of VSSC and IISU, who are studying in the 10th standard.

Dr Sarabhai, who was a visionary par excellence, combined in himself, the rare blend of a dreamer and pragmatist. He envisioned as early as 1968, large nuclear power stations, synchronous satellites for mass communication through direct broadcast television, meteorological observations and surveys of mineral resources of the subcontinent. While coming to the phase of translating these ambitions, Dr Sarabhai felt it important to instill these ideas in young minds.

This is precisely the reason, when this Centre is observing the birth anniversary of its mentor and great visionary, Dr Vikram Sarabhai, high school children are given an enviable place in the programme.

This year, the Familiarisation Programme was held on August 13, 2005. About 160 students participated in the programme.

Familiarisation Programme

Students came wearing their uniform, giving a colourful and vibrant look to the Centre.

Their day in VSSC began on a solemn note. On arrival at Veli Research Complex, the students made silent prayers and offered floral tributes at Dr Sarabhai Memorial. He students were briefed by Shri VP Bahugangadharan, Head, TDAD. He enlightened the students about the ongoing programmes of VSSC. He also gave a glimpse of the Research and Development activities being carried out in ISRO as a whole. They also visited the Space Museum.

In the afternoon, the students went visiting some of the facilities at Vahamala Complex (VMC). They were taken around the HAT facility at Liquid Propulsion Systems Centre. At MVTI, they visited the ELIX facility.

The one-day Familiarisation Programme provided the students with an insight into the multifarious activities undertaken by the Indian Space Research Organisation.

Students offering floral tributes at Dr Sarabhai Memorial





Prof B Hridayakumari, the Chief Guest

SBF Awards 2005



Chief Guest inaugurating Merit Award Day

The Staff Benevolent Fund (SBF) awards have become very popular amongst the VSSC community. The award presentation ceremony on August 12, every year has become an annual delight for the group of students with brilliant academic feats and their parents.

The awards were instituted with the objective of nurturing academic excellence among the wards of the employees of VSSC and IISU as well as among employees themselves who pursue their academic pursuits after joining the Centre. Today, the objectives have been met overwhelmingly, so much so that the students make it a point to fiercely vie for the honours.

This year, a total of 35 awards were declared under various categories. The awards were



Address by Chief Guest

given away at a glittering function, organized on August 12, 2005, coinciding with the 86th birth anniversary of Dr Vikram Sarabhai. The awards instituted by the Space Centre Employees Cooperative Society were also distributed at the same function.

SBF Merit Awards are distributed annually to students who score the highest marks in SSLC/CBSE/AISSCE/ISCE -12th and Higher Secondary (State Pattern). This year 22 students were selected for the SBF Merit

awards.

Dr Vikram Sarabhai Memorial Scholarships are awarded annually to those employees who pursue higher studies at the Engineering Diploma and B Tech levels and also at the BA, BSc or BCom levels, after their joining the Centre. This year 6 employees won Dr Vikram Sarabhai Memorial Scholarships—all of them for passing various engineering diploma or degree examinations.

The **PSLV Award** was instituted in 1998 by Dr G Madhavan Nair, the then Director, IISU, to commemorate the PSLV-D2 mission success. PSLV-D2 carrying the IRS-P2

satellite, launched on October 15, 1994, turned a new leaf in the launch vehicle history of India. The PSLV award is given annually to an employee belonging to group B, C or D for the best performance in his area of service in the Centre. The award carries a cash prize and citation.

The **Best Idea Award**, instituted in 2000, is intended to motivate employees to devise new, modified or innovative ideas that could be implemented to enhance the performance

of a product or service. The award carries a gold medal and citation.

The **Blood Donor's Award**, instituted in 2004, is awarded to an employee, who sets commendable achievement in voluntary blood donation.

SBF Special Awards are bestowed on wards of the employees who secure first ranks in university examinations or who excels exceptionally in athletic meets.

As is the usual practice, this year too, the **Merit Award Day - 2005** was organized at the VSSC auditorium. Dr BN Suresh, Director, VSSC and Patron, SBF presided over the well attended function. Prof B Hridayakumari, former Principal and renowned educationist was the Chief Guest. Shri Unni Perumangalath, Vice President, SBF, who delivered the welcome address, gave a glimpse of the genesis of the Staff Benevolent Fund in VSSC. Shri MA Vahab, President, Space Centre Employees' Cooperative Society (SCUCS) delivered the preface address. It was followed by the 'lighting of lamp' ceremony. Prof

Dr BN Suresh, Director addressing the Students



The prize winners with the Chief Guest and other dignitaries



AWARD WINNERS AT A GLANCE



Prize distribution by Director, VSSC



Prize distribution by Chief Guest

Hridayakumari lighted the Nilavilakku first, followed by Dr BN Suresh, Shri CB Kartha, Controller, VSSC and other dignitaries.

Dr Suresh, in his presidential address, called upon the student community to strive for excellence in their chosen fields.

Prof Hridayakumari, who began her address in English, soon switched over to Malayalam and had an intimate dialogue with the younger generation. She emphasized on broadening their reading habit. What is required was a thorough and constant reading of classics including poems, she exhorted.

Shri CB Kartha, Controller, Shri PB Giridharan, Sr Head PGA, Shri K Muraleedharan, Member, SBF Managing Committee, Shri S Suresh Babu, Vice President, SCECS and Shri VK Chandrasekharan Pillai, Chief Co-ordinator, Blood Donors' Forum felicitated the awardees.

The Chief Guest, Director and Controller distributed the various awards. Dr AG Rajendran spoke about the criterion applied for selecting the awardees.

Representing the award winners, some of the recipients also spoke, expressing their happiness on receiving the awards and felicitations and thanked the SBI and the Society. The function came to an end with the vote of thanks proposed by Shri A Stephenson, Sr Administrative Officer and Secretary, SBF.

SSLC

Kum SP LAKSHMI, d/o Smt B Pushpakumari and Shri N Sudhakaran Nair (SFD). Lakshmi is now a student of 1st year Higher Secondary Course at Government Girls Higher Secondary School, Conon Hill, Tvm.



Kum PAVITHRA M DAS, d/o Smt P Jayasree (SBT, Santhnagar) and Shri R Mohan Das (ALFD). Pavithra is now a student of 1st year Higher Secondary Course at Holy Angels Convent HS School, Tvm.



Kum S DIVYA, d/o Smt S Beena (SBT, Zonal) and Shri S Samadharan (LVDE). Divya is now a student of 1st year Higher Secondary Course at Holy Angels Convent HS School, Tvm.



Master S JAYADEVAN, s/o Smt Jayanthi R Nair and Shri A Surendran Nair (AMCD). Jayadevan is at present a student of 1st year Higher Secondary Course at St Joseph's HS School, Tvm.



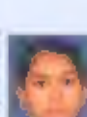
Kum R MEENAKSHI, d/o Smt R Usharani (SBT, NAC) and Shri KS Raghunathan (CMSE). Meenakshi is now a CBSE XI class student at Arya Central School, Pattom, Tvm.



Master SG AJESH ARAVIND, s/o Smt MS Kumari Ginja and Shri K Sivankutty Nadar (RPP). Ajesh is now a student of 1st year VHSE Course at VVHS School, Nemom.



Kum DHANYA G NAIR, d/o Smt Geethakumari and Shri B Sreekantan Nair (CDS/PGA). Dhanya is now a student of 1st year Higher Secondary Course at St Mary's HS School, Pattom, Tvm.

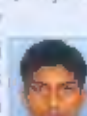


CBSE/ICSE - 10th

Kum V LAKSHMI MOHAN, d/o Smt K Vijayakumari (BMPD) and Shri D Mohan Kumar (QDPS). Lakshmi is at present a CBSE XI class student at Arya Central School, Pattom, Tvm.



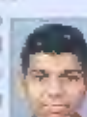
Master MG ASWIN, s/o Smt V Gitanjali (South Indian Bank) and Shri K Muraleedharan (MEE). Aswin is now a CBSE XI class student at Arya Central School, Pattom, Tvm.



Kum MARIA GEORGE, d/o Dr Mini K Paul (Medical College, Tvm) and Shri George V Varghese (IISU). Maria is now a ISC XI class student at St Thomas Residential School, Mukkallackal, Tvm.



Master ABHAY P DARWIN, s/o Smt VA Anitha (PUR/IISU) and Shri PN Darwin (ISHP/IISU). Abhay is now a ISC XI class student at Sarvodaya Vidyalaya, Nalanchira, Tvm.



CBSE(AISSCE)/ISCE - 12th

Master JITHIN JACOB, s/o Smt Lucamma Jacob (LIB) and Shri KA Jacob. Jithin is now a B Tech (Computer Science) student at College of Engineering, Tvm.



Kum GOPIKA DINESH, d/o Smt Geetha Dinesh (QDTE) and Shri Dinesh Babu (UCO Bank). Gopika is now a B Tech (Ele and Comm) student at SCT College of Engineering, Pappanamcode, Tvm.



Kum REETU RACHEL VARGHESE, d/o Smt Mariamma Marthow (QDPC) and Shri Varghese Cherian (Chidambaram Shipcare Pvt Ltd, Kochi). Reetu is now a student of B Tech (Ele and Comm) at School of Engineering,



CUSAT

Master H VIVEK, s/o Smt R Mini (SBI) and Shri R Haridas (COM). Vivek is at present a B Tech student at NIT, Calicut.

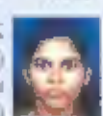


HIGHER SECONDARY 12th (State Pattern)

Master S SREEKUTTAN, s/o Smt L Ushakumari (RSR) and Shri S Suresh Babu (Canara Bank). Sreekuttan is awaiting admission for higher course.



Kum S CHITHIRA, d/o Smt K Snehalatha (Govt LPS, Vayyoorakavu) and Shri A Sreephen (SOG). Chithira is now a B Tech (Ele and Comm) student at LBS Institute of Technology for Women, Tvm.



Kum SOUMYA SANKAR, d/o Smt S Bhageerathi (IGA) and Shri M Sankaranarayana Iyer (Kerala State Textile Corp). Soumya is now a 1st year B Com student at NSS College for women, Neearamankara, Tvm.



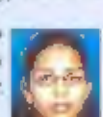
Kum C ASWATHY, d/o Smt CV Usha and Shri KK Govindan (MVIT ACCT). Aswathy is at present a B Tech (Ele and Comm) student at Government Engineering College, Kannur.



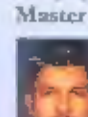
Master VK VIVEK, s/o Smt K Krishnakumari (QCI) and Shri C Viswanathan. Vivek is at present a 1st year B Tech (Ele and Comm) student at Sarabhai Institute of Science and Technology, Vellunad.



Kum SHEEMA THOMAS, d/o Smt Sheela Thomas and Shri S Thomas (HLS/EMD). Sheema is at present studying for 1st year B Com course.



Master Arun Saji, s/o Smt Benzev Mathew and Shri Saji P Chacko (S200 Project). Arun is now a 1st year B Com student at Chand Academy, Pattom.



Dr VIKRAM SARABHAI MEMORIAL SCHOLARSHIP



Shri PS. SAJAYAN
(CED)
B Tech - Civil Engg



Shri K. SATHYAN
(CMSE)
B Tech (Elec & Electronics Engg)



Shri B. MOHANAN PILLAI (ABSG)
B Tech (Mechanical)



Shri VINOY VARGHESE (PFC)
Diploma in Mechanical Engg



Shri V. RAMESH (RPP)
Diploma in Electrical Engg



Shri US. ANILKUMAR (TISU)
Diploma in Electronics Engg



Shri Karan Kollura (left) and Shri G. Sudraslan Rao (right) receiving the Award from the Director.

BEST IDEA AWARD

Shri G. Sudraslan Rao, Scientist / Engineer SC, MCD/MMG and Shri VSS Kiran Kollura, Scientist / Engineer SC, PPIF/MHE have won the Best Idea award 2005 for their combined proposal 'Flexible Fixture using MR Fluid'. This proposal envisages the application of flexible fixtures made up of magneto-rheological (MR) fluids for the machining of silica tiles for the thermal protection systems of RLVs. Since these 'smart fluids' change their physical state from liquid to solid only on application of a magnetic field, they can be made to match any surface profile and this property enables them to be repeatedly used as holding fixtures for the machining of the fragile silica tiles of any configuration, leading to savings in terms of money and effort.

Blood Donors Award

Shri M. Vasudevan, Pharmacist, VSSC Medical Service has won the Blood Donors Award 2005.



SBF SPECIAL AWARDS



Master SV SREEJITH
s/o Smt S. Valsada Kumari and Shri R. Sreedharan Nair (HLS/EMD) passed M.Sc. (Applied Electronics and Computer Technology) securing First Rank.

Kum. I. MANJUSHA,
d/o Smt K. Lakshmi Ammal (IST/PGA) and Shri S. Sankaran (Retd from Govt of Kerala) passed B.F.Sc. (Bachelor of Fisheries Science) securing First Rank.



Kum. RESHMA SARA RAJI,
d/o Smt Sherry Raji and Shri Raji Mathew (RSR) for being a Gold Medallist at the CBSE National Athletic Meet, Hyderabad. Reshma is a IX class student at VSSC Central School.



PSLV AWARD

Shri D. Hemanthlal, Sr Technician 'A', TDAD/PPEG

The PSLV award for the year 2005 is conferred on Shri D. Hemanthlal for his outstanding contributions in the field of layout and graphic design. Shri Hemanthlal's graphics are both aesthetically pleasing and technically appealing. His canvas is wide and includes areas such as logos, badges, greeting cards, posters, backdrops and cover pages for souvenirs, proceedings of seminars, technical reports and annual reports. His pleasing personality and his dedication in meeting tight time schedules earned him the appreciation from all concerned.

Countdown Congratulates all the Award Winners



Synthetic Diamonds

Ours is an age of synthetic materials - polymers, flavours, textiles, metals and what not. But synthetic diamonds do sound a bit crazy. During the 40's De Beers, the South African mining giant, introduced the campaign - A diamond is for ever. This turned diamond into the symbol of eternal love and dramatically increased the demand for these gems. This increased demand gave a spurt to the synthetic diamond industry.

Diamond is one of the three allotropes of carbon, the other two being ordinary charcoal and graphite. Over the centuries diamond has come to symbolize enduring love and emotional attachment. So synthetic diamond was a dream of chemists all over the world.

Synthetic diamonds were first produced by Allmänna Svenska Elektriska Aktiebolaget Laboratory in Stockholm, Sweden. GE researchers reported their own successful diamond synthesis in *Nature*. Later, other companies joined the fray. The latest entrant into the game is Apollo Diamonds, Boston. They have developed a low pressure chemical vapour deposition (CVD) process. Apollo is using CVD to grow small crystal diamond wafers big enough to be cut into diamond gemstones of a carat or more.

Diamonds having a perfect carbon lattice without defects and substitutions are colourless. But naturally occurring diamonds come in different colours due to the impurities present in the crystal. Yellow colour results when one nitrogen is present in about 20,000 carbon atoms. Boron impurity gives blue shade.



VC Joseph

With its very good electrical conductivity and electrical carrier mobility, single crystal diamond wafers would be the ultimate materials for fashioning high power electronic devices.

Diamond is an extra ordinary material. It is the hardest (60-70 Gpa Vickers) and stiffest material known. It is an excellent electrical insulator, has the highest thermal conductivity of any material (20W/cmK) yet barely expands when heated. It is transparent to UV, visible and IR radiations and is chemically inert to nearly all acids and bases.

Today, the annual production of synthetic diamonds is 100 tonnes. Tiny diamonds are used in saw blades for cutting asphalt, granite, marble in drill bits for oil and gas drilling and even as exfoliant in cosmetics.

(Adapted from C&E News and filed by)

Shri VC Joseph, PSCID

Sri Joseph retired from Service on August 31, 2005



Smt TS Ramadevi inaugurating the Exhibition

'India in Space' Exhibition

VSSC organised an exhibition, 'India in Space' at Sreenarayana Vilasam Higher Secondary School (SNVHS), Nedunganda, Varkala from August 10 to 17, 2005. It turned out to be a rare experience for thousands of students, teachers and the general public from in and around Varkala to observe the giant leaps made by Indian Space Programme. More than ten thousand people from all walks of life visited the scientific feast with enthusiasm.

The exhibition was inaugurated by Smt TS Ramadevi, Deputy

Director (ISA), VSSC. In her inaugural speech, Smt Ramadevi dwelt in detail about ISRO programmes, especially about the EDU/SAT programme.

Scaled down models of sounding rockets, viz., RH-75, RH-200, RH-300, RH-560 and launch vehicles SLV-3, ASLV, PSLV, GSLV, GSLV Mk III and also satellite models of Aryabhata, Bhaskara, Rohini, IRS series and INSAT series were on display.

'India in Space' Exhibition was also organised at All Saints College, Thiruvananthapuram during August 25 - 29, 2005.



Students viewing the Exhibition at All Saints College

First payment under VISWAS



The first payment under VISWAS (VAST Insurance Scheme Whenever Accident Strikes) which became operative in January 2005 was handed over Smt Susheela, wife of late S Gopalakrishnan (C&GHS).

Dr BN Suresh, Director, VSSC handed over the demand draft for Rs. 10 lakhs due to the nominee of the deceased on August 12, 2005 and expressed his deep condolences.

Late S Gopalakrishnan, 43, met with his untimely death on May 05, 2005.

SUPERANNUATION

Following colleagues bade good bye on superannuation during August 2005. Details are inserted in the order of Name, Division and Date of Joining.



G. Balasubramaniam
PED
11-06-1969



G. Ramakrishnan
RPP
01-07-1969



Rachel Thomas
FMD
16-09-1969



KS. Subramonian
SCIS/HSU
29-03-1970



V. Karunakaran Nair
COM
04-06-1970



S. Vinathanathan
PSCD
26-10-1970



KV. Thomas
MPD
09-11-1970



VP. Venugopalan
MMG
15-12-1970



A. Mohammed Basheer
EMD
24-12-1970



V. Krishnan
RPPV
11-02-1971



P. Dominic
PPFF
12-02-1971



VK. Venkateshram
CMSE
31-12-1971



M. Muralimohan
RPPF
31-05-1972



KN. Gopalakrishnan
CSL/AVN
06-10-1972



VC. Joseph
PSCG
23-06-1973



N. Peabhuksara Panicker
TOMD
02-03-1983

While appreciating the valuable services rendered to the Centre, *Countdown* wishes these colleagues a happy, purposeful and prosperous retired life !

VOLUNTARY RETIREMENT

The following colleagues left our Centre on Voluntary Retirement in August 2005. Details are given in the order of Name, Division in which they last worked, Date of Joining and Date of Voluntary Retirement.



C. Raja
GAD/PGA
25-07-1983 - 16-08-2005



G. Hariprasad
CMSE
01-03-1971 - 19-08-2005



N. Mohan
HPDD/AERO
01-11-1971 - 19-08-2005



K. Viswambharan
C&GH5
31-08-1972 - 31-08-2005

While appreciating the valuable services rendered to the Centre, *Countdown* wishes them all success in their future endeavours !



Dr BN Suresh, Director, VSSC taking salute at the Guard of Honour...

Jhanda Uncha Rebe Hamesha!

Independence Day Celebrations 2005

The 59th Independence Day was celebrated on August 15, 2005 with usual pomp, enthusiasm and gaiety at various places in VSSC and IISU. Celebrations were held at VRC, IISU, REPLACE and VSSC Central School. Flag hoisting by the Chief Guest, presentation of Guard of Honour by the CISF contingent, Independence Day Message by the Chief Guest and distribution of sweets were the major sequence of events at all these places.

The main function was held at Veli Hills, VRC. Dr BN Suresh, Director, VSSC was the Chief Guest at Veli Hills. A red carpet welcome was accorded to Dr Suresh on his arrival. The celebrations began when Dr Suresh hoisted the National Flag. He then inspected the Parade and received salute at the Guard of Honour presented by CISF. In his Independence Day Message, Dr Suresh called upon to take up the varied technological challenges lying ahead and successfully execute the missions within the time schedule. Another noteworthy feature was the planting of coconut saplings by Director, new entrants and others at a vast stretch of land in TERLS.

Dr V Krishnan, Associate Director, IISU, who was the Chief Guest at IISU, Vamyoorkavu hoisted the National Tricolour, inspected the parade and delivered the Independence Day Message.



Planting a coconut sapling



...delivering the Independence Day Message and

At REPLACE, Vattiyoorukavu, Shri Thomas C. Koshy, Group Head, CPSG/CMSE was the Chief Guest at the Republic Day Celebrations. He hoisted the National Flag, took salute at the Guard of Honour and addressed the gathering.

At the VSSC Central School, Independence Day was celebrated with much fanfare, enthusiasm and thrill. A number of events were organised on the occasion. The celebration began with the hoisting of National Flag by Shri P Kamalakhar Rao, Head Accounts/H/A, LPSC, Vallamala. The Chief



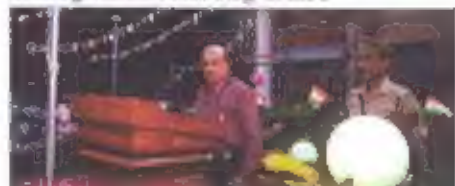
Shri Thomas C Koshy, Group Head, CPSG/CMSE hoisting the National Flag at REPLACE



Shri Thomas C Koshy taking salute at the Guard of Honour...



Dr V Krishnan, Associate Director, IISU hoisting the National Flag at IISU



Dr V Krishnan delivering the Independence Day Message



Shri P Kamalakhar Rao, Head Accounts/H/A, LPSC hoisting the National Flag at VSSC Central School



Prize distribution to the winners

Jubilant children at VSSC Central School

Editorial Committee : Dr V Adinarayn, Chairman, Shri Sojan Thomas, Shri VP Balagangadharan, Dr S Rajendran,

Shri ESN Narasimhan, Shri CS Harish, Members, Shri KB Saranyan, Convener.

Published by the Technical Documentation and Archival Division, Vikram Sarabhai Space Centre, Thiruvananthapuram-695022.

Printed by M/s Armita Offset, Thycaud, Thiruvananthapuram